7 Pulmonary Medicine

1. Transfusion-related acute lung injury occurs within:
A. 2 hours of transfusing the patient
B. 3 hours of transfusing the patient
C. 5 hours of transfusing the patient
D. 6 hours of transfusing the patient

Ans D 6 hours of transfusing the patient

Transfusion-related acute lung injury (TRALI) presents as acute respiratory distress, either during or within 6 hours of transfusing the patient. The recipient develops symptoms of respiratory compromise and signs of noncardiogenic pulmonary edema, including bilateral interstitial infiltrates on chest x-ray. Treatment is supportive, and patients usually recover without sequelae. TRALI usually results from the transfusion of donor plasma that contains high-titer anti-HLA antibodies that bind recipient leukocytes.

2. Alveolar rhabdomyosarcomas are least common in:
A. Extremeties
B. Paranasal sinuses
C. Parameningeal spaces
D. Liver

Ans D Liver

Translocations involving PAX3 and PAX7 are seen in alveolar rhabdomyosarcomas. These tumours are Primitive Myoblastic Neoplasms Myogenin and Myo D positivity may be there. **They are common in:**
- Extremeties
- Paranasal sinuses
- Parameningeal spaces

3. ESAT 6. A protein is highly specific to:
A. Mycobacterium tuberculosis
B. Nipah virus
C. Mycoplasma
D. Pseudomonas

Ans A Mycobacterium tuberculosis

ESAT 6. What it is.....
- secretory protein
- antigenic target
- Produced by mycobacterium tuberculosis
- is a T cell antigen
- virulence factor of mycobacterium tuberculosis

4. A Patient with severe Respiratory infection is given Ceftobiprole. It is a drug activated by:
A. Hydrolase
B. Esterase
C. Lipase
D. Tryptase

Ans B Esterase

Ceftobiprole This is another 5th generation cephalosporin active against MRSA and several gram Positive and gram negative bacteria associated with hospital acquired pneumonia (HAP) as well as with CAP. Ceftobiprole medocaril is also a prodrug, which is rapidly converted to the active ceftobiprole by type A esterases in humans.

5. A Patient with fever and consolidation is having "Bow fissure" sign. Most likely cause is:
A. Staph
B. Mycobacterium
C. Legionella
D. Klibesella

Ans D Klibesella

Klebsiella Pneumoniae
Caused by **Friedlander's bacillus**.
Typically affects elderly debilitated men.
Usually causes lobar consolidation, more often right sided, and frequently upper lobar.
The volume of affected lung may be increased due to copious exudation of fluid producing typical **"Bulging fissure" or "Bow fissure" sign.**
Cavitation is also known.

6. Serratia marcescens can cause multiple infections True about it is:
A. Rod, Aerobe, non indole producing, Oxidase negative
B. Rod, Facultative Anaerobe, non indole producing, Oxidase Positive
C. Cocci, Facultative Anaerobe, non indole producing, Oxidase negative
D. Rod, Facultative Anaerobe, non indole producing, Oxidase negative

Ans D rod, Facultative Anaerobe, non indole producing, Oxidase negative

Serratia marcescens
- Enteric
- gram-negative
- rod, Facultative Anarobe, non indole producing, Oxidase negative
- similar to klebsiella pneamoniae.
- Cause hospital-acquired pneamonia, UTI and sepsis.
- Red-pigmented colonies Highly antibiotic-resistant.

7. Limbic Encephalitis is common in:
A. Small Cell lung Cancer
B. Lymphoma lung
C. Squamous cell cancer lung
D. Bronchial Adenoma

Ans A Small Cell lung Cancer

Remember Associations:
- Limbic Encephalitis: Small Cell lung Cancer
- Subacute Cellular Degeneration: Small cell lung Cancer
- Subacute Sensory neuropathy: Small cell lung Cancer
- Subacute Motor neuropathy: Lymphoma

8. Fausidil is used as:
A. Rho kinase inhibitor and vasoconstrictor
B. Rho kinase inhibitor and vasodilator
C. Rho kinase activator and vasodilator
D. Rho kinase activator and vasoconstrictor

Ans B Rho kinase inhibitor and vasodilator

Fausidil is Rho kinase inhibitor and vasodilator.

Fausidil has a role in
- Relieving Vasospasm in SAH. (Nimodipine has similar role)
- Treating Pulmonary Hypertension
- Improving Cognition in Alzhiemers Disease

9. Which is true of Faropenem and Doripenem used in Respiratory Infections:
A. Faropenem is non carbapenem β-lactam antibiotic
B. Faropenem is orally inactive
C. Doripenem is more active against some resistant Pseudomonas
D. Doripenem is highly susceptibility to renal peptidase

Ans C Doripenem is more active against some resistant Pseudomonas

6 Cardiology

1. The Cardiologist Prescribes Zalunfiban to a Patient in Coronary Care Unit. The Mechanism of Action of the Drug is:

A. Integrin alpha Ib beta 2 receptor antagonist
B. Integrin alpha IIb beta 3 receptor agonist
C. Integrin alpha IIb beta 3 receptor antagonist
D. Integrin alpha Ib beta 2 receptor agonist

Ans C Integrin alpha IIb beta 3 receptor antagonist

Zalunfiban is used in STEM I Heart Attack. Integrin alpha IIb beta 3 receptor antagonist. It is given as a SC injection. It is rapidly absorbed.

2. Major Criteria for FMF (Familial Meditarrean Fever) include:

A. Pleuritis, Pericarditis, Monoarthritis
B. Pleuritis, Pericarditis, Polyarthritis
C. Polyarthritis and Pericarditis only
D. Polyarthritis and Pleuritis but not Pericarditis,

Ans A Pleuritis, Pericarditis, Monoarthritis

Major Criteria for FMF:

- Pleuritis/Pericarditis
- Monoarthritis
- Fever
- Abdominal pain
- Peritonitis

3. Main Pathology in Cardiovascular Syphilis is:

A. Hypertrophy of Tunica Elastica
B. Direct Involvement of Myocardium
C. Hemorrhage within Blood vessels
D. Endarteritis obliterans of the vasa vasorum

Ans D Endarteritis obliterans of the vasa vasorum

Cardiovascular syphilis Cardiovascular manifestations, usually appearing 10-40 years after infection, are attributable to endarteritis obliterAns of the vasa vasorum, which provide the blood supply to large vessels; T. pallidum DNA has been detected by PCR in aortic tissue. Cardiovascular involvement results in uncomplicated aortitis, aortic regurgitation, saccular aneurysm (usually of the ascending aorta), or coronary ostial stenosis.

4. Empagliflozin. Which is true of this drug:

A. Used in Hypotension
B. Increases arterial stiffness
C. Reduces systolic BP
D. All of Above

Ans C Reduces systolic BP

Empagliflozin.

- is SGLT 2 Inhibitor

- Can be used as monotherapy or in combination
- Reduces Hypertension as well
- Reduces arterial stiffness
- Reduces systolic BP
- Improves cardiac metabolism

5. (3C) Syndrome has Components except:

A. Cranio
B. Cerebello
C. Cardiac
D. Caudal

Ans D Caudal

Cranio-cerebello-cardiac (3C) syndrome:

A rare multiple congenital anomalies syndrome

- **CRANIOFACIAL ANAMOLIES:**
  1. Prominent Occiput And Forehead,
  2. Hypertelorism,
  3. Ocular Coloboma,
  4. Cleft Palate
  5. Cerebellar

DANDY-WALKER MALFORMATION:

1. Cerebellar Vermis Hypoplasia

Cardiac:

1. Tetralogy Of Fallot,
2. Atrial Septal Defect And
3. Ventricular Septal Defects.

6. Which is not true of Trimetazidine:

A. Non Cellular anti ischemic drug
B. has cytoprotective effect on myocardium energy metabolism
C. Prevents lipid peroxidation
D. In presence of ischemia maintains LV Function

Ans A. Non Cellular anti ischemic drug

Trimetazidine is:

- New Ca+2 channel blocking drug
- Cellular anti ischemic drug that has cytoprotective effect on myocardium energy metabolism
- Prevents lipid peroxidation and superoxide induced cytotoxicity to myocardium after re perfusion induced injury after ischemia
- In presence of ischemia it maintains LV Function.

7. In a Patient, the primary laceration is in the ascending aorta, and the false passage extends to about the level of the aortic arch, it would classify as Debaky:

A. Type IV
B. Type III
C. Type II
D. Type I

Ans C Type II

Type I: The primary laceration is in the ascending aorta, and the false passage within the media extends along the full length of the aorta.
Type II: The primary laceration is in the ascending aorta, and the false passage extends to about the level of the aortic arch.
Type III: The primary laceration is at the junction of the arch and descending aorta, and the false passage extends distally to the terminal part of the aorta.

8. Levosimendan. Which is not true of this drug:

A. Acts by sensitizing myocardial tropomin C to Ca2+
B. Acts by inhibiting PDE3.
C. Closes ATP-sensitive K+ channels
D. Is classified as inodilator

Ans C Closes ATP-sensitive K+ channels

Levosimendan

This inotropic drug acts by sensitizing myocardial tropomin C to Ca^{2+}, as well as by inhibiting PDE3. As such, the inotropic effect occurs even in patients receiving b blockers, and is not associated with a change in cystolic CA^{2+} concentration. It also opens ATP-sensitive K^{+} channels in vascular smooth muscle cells to cause vasodilatation. Thus, it is another 'inodilator', haemodynamic improvement in heart failure is both due to increase in cardiac contractility as well as reduction in preload and afterload.

5 Endocrinology

1. **A Patient has ONCOGENIC OSTEOMALACIA. Most Likely he will have:**
   A. Serum calcium and PTH levels low, and 1,25-dihydroxyvitamin D is High
   B. Serum calcium and PTH levels normal, and 1,25-dihydroxyvitamin D is high.
   C. Serum calcium and PTH levelshigh, and 1,25-dihydroxyvitamin D is also high.
   D. Serum calcium and PTH levels normal, and 1,25-dihydroxyvitamin D is low.

Ans D **Serum calcium and PTH levels normal, and 1,25-dihydroxyvitamin D is low.**

Hypophosphatemic oncogenic osteomalacia, also called tumor-induced osteomalacia (TIO), is characterized by markedly reduced serum phosphorus and renal phosphate wasting, leading to muscle weakness, bone pain, and osteomalacia. Serum calcium and PTH levels are normal, and 1,25-dihydroxyvitamin D is low.

2. **NPY receptors are targeted for treating:**
   A. Mood disorders
   B. Corns syndrome
   C. Addisons disease
   D. Obesity

Ans D **Obesity**

Recombinant human leptin

- New drugs are also being developed based on insights into central pathways that regulate body weight. These include antagonists for **NPY receptors (subtypes Y1, Y5) and agonists for melanocortin 4 receptors.**

3. **What is true of Abarelix:**
   A. Leutinising Hormone agonist
   B. Octapeptide produced Synthetically
   C. Agonist of Testosterone
   D. Contraindicated in Prostate Cancer

Ans D **Leutinising Hormone agonist**

Abarelix is

- Leutinising Hormone agonist
- Decapeptide produced Synthetically
- Antagonist of Testosterone
- Used in Advanced in Prostate Cancer

4. **A 66 year old with Paget's disease would most likely reveal:**
   A. Serum calcium High, phosphorous Normal, and parathyroid hormone (PTH) levels are usually normal
   B. Serum calcium High, phosphorous grossly elevated, and parathyroid hormone (PTH) levels are usually normal
   C. Serum calcium Normal, phosphorous high, and parathyroid hormone (PTH) levels are usually low
   D. Serum calcium, phosphorous, and parathyroid hormone (PTH) levels are usually normal

Ans D **Serum calcium, phosphorous, and parathyroid hormone (PTH) levels are usually normal**

Markers of **bone resorption** from osteoclast activity are the urinary N-telopeptide of type I collagen and the serum alpha-alpha type I **C-telopeptide** fragments, which are elevated in Paget's disease and are the earliest markers to respond to therapy. Serum calcium, phosphorous, and parathyroid hormone (PTH) levels are usually normal

5. **De Castilo syndrome is most commonly characterised by:**
   A. small testis, azoospermia
   B. large testis, Polyspermia
   C. large testis, azoospermia
   D. Totally Absent testis, azoospermia

Ans A **small testis, azoospermia**

De Castilo syndrome

- Also Known as Sertoli cell only Syndrome
- Features are small testis, azoospermia
- Is a cause of male infertility

6. **A Child is labelled with Gordons syndrome. Main features seen would be:**
   A. Hyperkalemia seen, Decreased Renin, Decreased Aldosterone
   B. Hypokalemia seen, Decreased Renin, Decreased Aldosterone
   C. Hypokalemia seen, Increased Renin, Decreased Aldosterone
   D. Hyperkalemia seen, Increased Renin, Increased Aldosterone

Ans A **Hyperkalemia seen, Decreased Renin, Decreased Aldosterone**

Gordons syndrome
Mutation of Genes

- WNK1
- WNK4

Features seen are:

- Hypertension
- Salt sensitivity plus
- Hyperkalemia seen
- Decreased Renin
- Decreased Aldosterone

These features should be Remembered

7. **The Combination of Hypopitutarism and Anopthalmia is generally associated with all except:**
   A. SIX6
   B. SOX2
   C. OTX2
   D. SMAD

Ans D **SMAD**

The Combination of Hypopitutarism and Anopthalmia is generally associated with Mutations of genes

- SIX6
- SOX2
- OTX2

Pituitary Hypoplasia can occur as an isolated phenomenon as well. Hall Palister syndrome is one of the entities associated with Pituitary Hypoplasia.

8. **Pearsons syndrome. Which statement best reflects the disease:**
   A. Exocrine Pancreatic Deficency with Diabetes mellitus and Pancytopenia
   B. Endocrine Pancreatic Deficency with Diabetes mellitus and Pancytopenia
   C. Endocrine Pancreatic Deficency with Diabetes inspidius and Polycythemia
   D. No Pancreatic Deficency with Diabetes inspidius and Polycythemia

Ans A **Exocrine Pancreatic Deficency with Diabetes mellitus and Pancytopenia**

Pearsons syndrome presents not as endocrine disorder but as

- Exocrine Pancreatic Deficency
- Diabetes mellitus
- Pancytopenia

4 Medical Oncology

1. **Bortezomib is a drug given in oncology. True about it and its mechanism of action is:**
   A. boron containing compound that covalently binds to proteasome
   B. non boron containing compound that covalently binds to proteasome
   C. boron containing compound that non covalently binds to lysosome
   D. non boron containing compound that covalently binds to lysosome

Ans A **boron containing compound that covalently binds to proteasome**

Bortezomib It is a unique boron containing compound that covalently binds to proteasome and inhibits its proteolytic activity, disrupting many intracellular signalling pathways. The most important of these is nuclear factor-κB (NF-Kβ) mediated signalling. NF-κb is a transcription factor that normally resides in the cytoplasm bound to an inhibitory protein IκB.

2. **What is True of Napsin A:**
   A. Is not present in Normal Lung tissue
   B. Involved in Lysis of Surfactant protein B
   C. Is useful marker in Renal Cell Cancers (Papillary Type)
   D. All of Above

Ans C **. Is useful marker in Renal Cell Cancers (Papillary Type)**

Napsin A

- Asparticprotease
- Expressed in normal Type II Pneumocytes
- Involved in maturation of Surfactant protein B
- Expressed in Lung Adenocarcinomas
- Expressed in Renal Cell Pappilary cancers

3. **Expression of c-erb B-2 oncogene is used in staging of:**
   A. Medulloblastomas
   B. Astrocytomas
   C. Choroid Plexus Pappilomas
   D. Craniopharyngiomas

Ans A **Medulloblastomas**

Expression of c-erb B-2 oncogene is used in staging of Medulloblastomas
Increased c-erb B-2 expression reflects increased proliferative activity of tumour.
No c-erb B-2 expression indicates a good prognosis.

4. **DNETS (Dysembryoplastic Neuroepithelial Tumours) are:**
   A. Malignant Typically, Uncommon in Temporal Lobe
   B. Malignant Typically, Common in Temporal Lobe
   C. Benign Typically, Uncommon in Temporal Lobe
   D. Benign Typically, Common in Temporal Lobe

Ans D **Benign Typically, Common in Temporal Lobe**

DNETS (Dysembryoplastic Neuroepithelial Tumours) are:

- Slow Growing
- Benign Typically
- WHO Grade 1 Tumours
- Common in Temporal Lobe
- On MRI Usually have Bubbly appearance with Cortical Dysplasia

5. **CTNNB1 and APC Mutations are common in:**
   A. Desmoids
   B. Melanomas
   C. GIST Tumours
   D. Synovial sarcomas

Ans A **Desmoids**

Desmoid tumors of the abdominal wall are benign fibrous tumors that arise from the musculoaponeurotic abdominal wall. These tumors are **histologically benign** but frequently are **locally invasive and are prone torecurrence after local excision. They present as firm, subcutaneous masses that grow slowly. They should be widely excised to prevent local recurrence. They do not have a propensity toward metastasis. They are common in Abdomen and Particularly associated with Gardeners syndrome. CTNNB1 and APC Mutations may be common**

6. **Latency Associated Nuclear Antigen 1 is associated with:**
   A. EBV
   B. CMV
   C. H pylori
   D. HHV 8

Ans D **HHV8**

Detec tion of the **"KSHV protein LANA" in tumor cells confirms the diagnosis.** Latency Associated Nuclear Antigen 1 is associated with HHV8 **(Kaposis Sarcoma).** The tumor is highly vascular, containing abnormally dense and irregular blood vessels and seen in association with HIV.

7. **Fechner Tumour is:**
   A. low grade common lung tumour
   B. low grade rare lung tumour
   C. high grade rare lung tumour
   D. high grade common lung tumour

Ans B **low grade rare lung tumour**

Fechner Tumour is a low grade rare lung tumour. It has been reported in children and adults.
Metastasis is infrequent.
Presence of Zymogen granules is a feature of most Fechner cell tumours.

8. **Peptidyl proline cis-trans isomerase is a specific target for action of which drug:**
   A. Cyclosporine
   B. Rituximab
   C. Trastuzumab
   D. L Asparginase

Ans A **Cyclosporine**

Cyclosporine:
It binds to cyclophilins (peptidyl proline cis-trans isomerase),
Thi causes blocking the differentiation and activation of T cells mainly by inhibiting the production of IL-2 and its receptor.

9. **Targretin is Mainly used for treatment of:**
   A. Melanoma
   B. GIST Tumours
   C. Hepatoblastomas
   D. Cutaneous T-cell lymphoma

Ans D Cutaneous T-cell lymphoma

Targretin is also known as Bexarotene

- **It is used for cutaneous T-cell lymphoma.**
- It Activates Retinoid X receptors.
- Is a synthetic Retinoic aid
- It induces cell differentiation and Apoptosis

3 Nephrology

1. **A mutation in the highly selective epithelial sodium channel (ENaC) in the distal nephron would most likely cause:**
   A. Alports Syndrome
   B. Liddle's syndrome
   C. Cystic Fibrosis
   D. DIDMOAD Syndrome

Ans B **Liddle's syndrome**

Liddle's syndrome is a rare autosomal dominant condition caused by a mutation in the highly selective epithelial sodium channel (ENaC) in the distal nephron. It is characterised by hypokalaemia with hypertension. The overactive ENaC causes increased sodium uptake with accompanying increased water uptake, thus blood volume is increased causing secondary hypertension.

2. **sFLT 1. What is the best statement about source and the effects of this substance:**
   A. Secreted by placenta, Causes Vasoconstriction, Hypertension and preeclampsia
   B. Secreted by Ovaries, Causes Vasoconstriction, Hypertension and preeclampsia
   C. Secreted by kidneys, Causes Vasodilatation, Hypotension and preeclampsia
   D. Secreted by kidneys, Causes Vasoconstriction, Hypotension and preeclampsia

Ans A **Secreted by placenta, Causes Vasoconstriction, Hypertension & preeclampsia**

sFLT 1:

- Is Antiangiogenic factor
- Is secreted by placenta
- It is a variant of receptor VEGF

Causes:

- Vasoconstriction
- Hypertension
- Proteinuria

Is implicated in causation of Eclampsia

3. **Which is True of Fibronectin:**
   A. Exists as insoluble form in plasma
   B. Causes cellular migration.
   C. Non proteinaceous
   D. All of Above

Ans B **Causes cellular migration.**

Fibronectin

- Is an important glycoprotein
- Belongs to extracellular interstitial matrix also found in soluble form in plasma, which is involved in cell adhesion & migration.

4. **A 7-year-old has muscular weakness, polyuria and on examination seems to be dehydrated. Blood Pressure is 110/70 mmHg. His Potassium levels are 2.3 mmol/L. Urinary Potassium and Chloride levels are high. Renin Levels are Elevated. Most Likely Cause is:**
   A. Barrters Syndrome
   B. Hemolytic Uremic Syndrome
   C. Chronic Pyelonephritis
   D. Minimal Change Glomemlonephritis

Ans A **Barrters Syndrome**

Barrters Syndrome is characterized by muscular weakness, polyuria, cramps and is a rare form in which potassium wasting occurs. Characteristic of Bartter's syndrome are Hypokalemia, Metabolic alkalosis Normal to low blood pressure with Elevated rennin levels and Elevated aldosterone levels. Hyperplasia of JG Apparatus Occurs. This Child has muscular weakness, polyuria Normal Blood Pressure of 110/70 mmHg and Hypokalemia (Pottasium levels 2.3 mmol/L.) and Increased Urinary Pottasium and Chloride levels with Elevated Renin Levels a full Proof of this Clinical Entity.

5. **What is true about use of Belatacept:**
   A. Is a potent T CELL Costimulator activator
   B. Never Used in Combination with Basiliximab.
   C. Has better cardiovascular profile than Ciclosporine
   D. All of Above

Ans C **Has better cardiovascular profile than Ciclosporine**

Belatacept

- Is a potent T CELL Costimulator inhibitor
- Is an effective alternative to Cyclosporine in Transplant Patients.
- **Has better cardiovascular** and metabolic profile than Ciclosporine
- Causes post transplant Lymphoproliferative disorders
- Used in Combination with Basiliximab in many Disorders.

6. **MPO ANCA Disease is characterised by:**
   A. Extra Renal mainfestations mostly
   B. Frequent recurrences
   C. Nasal deformities common
   D. None of Above

Ans D **None of Above**

MPO ANCA Disease is characterised by

- Renal limited disease usually
- Lung involvement without nodules usually
- NO ENT Involvement usually (Ear, Nose Throat not involveled)
- Recurence is less frequent

7. **In an Elderly male with Nocturia, not a modality of treatment is:**
   A. Intranasal desmopressin
   B. Electric shock stimulation therapy
   C. Intravesical BCG
   D. Botulinum injection

Ans C **Intravesical BCG**

Intranasal desmopressin should be offered to any person with a history of nocturia, or those who have the patient is able to perform this). Electric shock stimulation therapy can be used followed by a structured programme of pelvic floor muscle exercises. Intravesical botulinum injection is also a possibility. Ultimately long-term catheterisation may be required, but the patient's sexual function should be considered prior to this.

8. **A Twenty year old male had bilateral Lion Pain and Frank Hematuria Following a sore throat for which he was taking Antibiotics. Urine Analysis Shows protein 3+ and RBCs. Microscopic analysis of his renal biopsy specimen is most likely to show:**
   A. Nephrolithiasis
   B. Tubular necrosis
   C. Podocyte fusion
   D. Mesangial deposits of IgA

Ans D **Mesangial deposits of IgA**

IgA nephropathy presents as recurrent hematuria especially in young men. It is more common in males than in females (2:1). Patients either present with an episode of gross hematuria or are found to have microscopic hematuria on ro
streptococcal Infectio

2 Clinical Haematology

1. **A young Patient is detected with Kikuchi-Fujimoto disease. The disease is:**
   A. is a non histiocytic, non necrotizing lymphadenitis
   B. is a histiocytic, necrotizing lymphadenitis
   C. is a histiocytic, non necrotizing lymphadenitis
   D. is a non histiocytic, necrotizing thrombophelibitis

Ans B is a histiocytic, necrotizing lymphadenitis

Kikuchi's disease:

Kikuchi-Fujimoto disease is a histiocytic, necrotizing lymphadenitis. Most patients are less than age 40 years and previously well. The most common presentation is fever (30% to 50%) and cervical lymphadenopathy (100%). Fever is low grade and lasts 1 to 4 weeks. Cervical adenopathy is usually unilateral and affects the posterior more than the anterior lymph nodes.

2. **A Doctor prescribes Iptacopan to a Patient. The Mechanism of Action of the Drug is:**
   A. Anti C 5 and Factor B activator
   B. Factor B Inhibitor
   C. Integrin alpha IIb beta 3 receptor antagonist
   D. Integrin alpha Ib beta 2 receptor agonist

Ans B Factor B Inhibitor

PNH is treated by multiple drugs. Some Drugs used are Eculuzimab and Ravulizumab. Iptacopan is usedin adult PNH and gas been found to be effective. It acts as a Factor B Inhibitor of alternate Complement Pathway.

3. **A Hematooncologist prescribes Momelotonib to a Patient. The Most benefitted Patient would be the one suffering from:**
   A. Myelofibrosis
   B. PNH
   C. Polycythemia
   D. CML

Ans A Myelofibrosis

Momelotonib is a ATP Competetive molecule and inhibitor of KAK 1, JAK 2, JAK 3 and TYK2.It is effective in Myelofibrosis. It has been found to have benefit over use of Hydroxyurea.

4. **A group of patients were surveyed. They had Orotic aciduria. This clinical entity is characterized by:**
   A. AD Inheritance, Macrocytic anemia and Crystalluria
   B. AR Inheritance, Macrocytic anemia and Crystalluria
   C. XLR Inheritance, Macrocytic anemia and Crystalluria
   D. AR Inheritance, Macrocytic anemia and Proteinuria

Ans B AR Inheritance, Macrocytic anemia and Crystalluria

MACROCYTIC Anemia is caused by

- Vit.B12 deficiency
- Thiamine deficiency
- Orotic aciduria
- Nitrous oxide inhalation
- Liver disease
- Hypothyroidism
- Folic acid deficiency

Orotic Aciduria has features of

- AR Inheritance,
- Microcytic anemia and
- Crystalluria

5. **Antibodies to VGKC-related proteins have an underlying tumor which is usually:**
   A. RCC
   B. Basal cell Carcinoma
   C. SCLC
   D. Mediastinal Lymphoma

Ans C SCLC

Encephalitis with antibodies to voltage-gated potassium channels (VGKC)-related proteins (LGII, Caspr2) predominates in men and frequently presents with memory loss and seizures (limbic encephalopathy), along with hyponatremia and sleep and autonomic dysfunction. Less commonly, patients develop neuromyotonia or a mixed clinical picture (Morvan's syndrome). Approximately 20% of patients with antibodies to VGKC-related proteins have an underlying tumor, usually SCLC or thymoma.

6. **A one month-old male infant is brought to you by his parents complaining that, for the past four weeks, he has been progressively lethargic, feeds poorly, tires easily and has increasing pallor. On examination, you note pallor of the mucous membranes and conjunctivae. He is mildly tachycardic. The child has triphalangeal thumbs. Lab tests show:**

Hb	6.5 g/dL
Ht	32%
MCV	100fL
Platelets	330, 000 /cmm
WBCs	11, 000/cmm
Reticulocytes	0.4%
Bilirubin direct	0.1 mg/dL
Bilirubin total	1.0 mg/dL

Which of the following is the most likely diagnosis?
A. SCID
B. PRCA
C. Fanconi's anemia
D. Diamond-Blackfan anemia

Ans D Diamond-Blackfan anemia

This is a case of Diamond-Blackfan anemia. A macrocytic anemia with low reticulocyte count, in association with the congenital anomalies described, point to Diamond-Blackfan syndrome (DBS), also called congenital hypoplastic anemia. It is not a common entity.

7. **In a Patient with Multicentric reticulohistiocytosis, most common lab manifestation would be:**
   A. Vimentin positivity, S 100 negativity, CD 34 Negativity
   B. Vimentin positivity, S 100 positivity, CD 34 Negativity
   C. Vimentin positivity, S 100 negativity, CD 34 positivity
   D. Vimentin negativety, S 100 negativity, CD 34 Negtivity

Ans B Vimentin positivity, S 100 negativity, CD 34 Negativity

Multicentric reticulohistiocytosis

Multicentric reticulohistiocytosis (MRH) is a rare disease with prominent skin and joint manifestations that is classified among the non-Langerhans cell histiocytoses. It affects females more than males (3:1), most commonly in the fourth decade. Most patients have symmetric polyarthritis.

Theophylline (1,3-dimethylxanthins) can indirectly stimulate both β1 and β2 receptors through release of endogenous catecholamines. Propranolol and verapamil were useful in controlling supraventricular tachycardia. It appears that most patients with severe theophylline toxicity can be managed without hemoperfusion, which should be considered only when drug clearance is reduced, and hypotension, tachycardia, ventricular ectopy, or seizures are refractory to conservative measures. Propranolol is Effective.

71. Metrifonate is effective against:
A. Amoebiasis
B. Leishmaniosis
C. Schistosomiasis
D. Giardiasis

Ans C Schistosomiasis

The introduction and development of the organophosphorous drug metrifonate, first as an insecticide and then for the treatment of urinary schistosomiasis, has followed an unusual course. In its most widely accepted treatment regimen it is safe, effective and apparently without significant side effects. Prizaquantel however is a more preffered drug.

72. A 33 year old female presented with a swelling over her jaw. The skin over the swelling was having a sinus discharging odorless pus. Fever, pain, and leukocytosis are present. She was given Benzyl pencillin by her specialist and the Infection resolved. The diagnosis is:
A. Legionella
B. Bartonella
C. Anthrax
D. Actinomycosis

Ans D Actinomycosis

Actinomycosis presents as abscesses with draining sinus tracts especially over jaw with sinuses discharging sulfur granules and good response to pencillins. This lady presented with a swelling over her jaw having a sinus discharging odorless pus with Fever, pain, and leukocytosis are present and responded to Benzyl pencillin suggesting infection by actinomyces israelli.
Laboratory Diagnosis of Antinomyces israelii is gram-stained smear plus anaerobic culture on blood agar plate." Sulfur granules" are visible in the pus.

73. A 55 year old HIV positive male developed decreased memory registration and decrese in Attention with less of memory recall. HAND (HIV associated Neurocognitive Disorder was diagnosed). The drug likely to be Most effective is:
A. Lamivudine
B. Efavirenz
C. Atazanavir
D. Ritonavir

Ans D Vicriviroc

Vicriviroc is a newer CCR 5 Antagonist. It has a good CSF Penetration and is used in treatment of HAND.

74. 200 patients with HIV Positive status were tried on trials for Enfuvirtide. The drug is now used for AIDS. It is:
A. Maturation inhibitor
B. Fusion inhibitor
C. Telomerase inhibitor
D. Necleosidase inhibitor

Ans B Fusion Inhibitor

Enfuvirtide is now widely used in AIDS. It is a synthetic 36-amino-acid peptide fusion inhibitor that blocks HIV entry into the cell. Enfuvirtide binds to the gp41 subunit of the viral envelope glycoprotein, preventing the conformational changes required for the fusion of the viral and cellular membranes.

GENERAL MEDICINE

75. CSF Analysis in a patient with Headache shows Gram negative Diplococci with Pus Cells. Likely agent is:
A. Gonococcus
B. Mycoplasma
C. Meningococcus
D. Streptococcus Pneumoniae

Ans C Meningococcus

Neisseria meningitides (Meningococcus)
- Causes
  - Meningitis
  - Meningococcemia
  - Water house Freidrichsen Syndrome
- Characteristics of Neisseria meningitides (Meningococcus) are: gram-negative "kidney or bean" diplococci. Oxidase-positive. Large polysaccharide capsule. One of the three classic encapsulated pyogenic bacteria (Streptococcus pneumoniae and Haemophilus influenza are the other two).
- Laboratory Diagnosis of Neisseria meningitides (Meningococcus) is gram-stained smear and culture.

76. A 77 year old male has a non healing ulcer in his face which developed after a burn scar five years ago. Biopsy indicates that it has developed malignancy. Most likely cause is:
A. Melanoma
B. Squamous cell cancer
C. Malignant melanoma
D. Keratocanthoma

Ans B Squamous cell cancer

Squamous cell carcinomas are known to occur in scars or burn patients and are seen as non-heading wounds. These are specifically Marjolins Ulcers developing into squamous cell cancers.

77. A 55 year old male with Extensive Psoriasis and on PUVA Therapy has a non healing ulcer in his face. The Edge of ulcer is raised and everted with indurated base. There is associated cervical lymphadenopathy. Biopsy indicates that it has developed malignancy. Most likely cause is:
A. Squamous cell cancer
B. Melanoma
C. Malignant melanoma
D. Keratocanthoma

Ans A Squamous cell cancer

Features of Squamous cell cancer are that the Edge of ulcer is raised and everted with indurated base and first site of metastasis is regional lymph node. The Main presenting symptom of SCC is nodule or ulcer.

78. Not True About H pylori is:
A. Flagellate
B. Microaerophilic
C. Urease Negative
D. Invasive

Ans C Urease Negative

Helicobacter pylori
- Causes Gastritis and peptic ulcer. Risk factor for gastric carcinoma.
- Characteristics of Helicobacter pylori are in curved gram- negative rods. Characteristics of Helicobacter pylori are curved gram- negative rods.
- Motile
- Microaerophilic
- Produce urease
- Laboratory Diagnosis of Helicobacter pylori is gram-stain and culture. Urease-positive. Serologic tests for antibody and the urea breath test are useful.

79. A 26 year old you
intermittent attac

1 General Medicine

1. In a Patient with Segmental arterial mediolysis (SAM which is most accurate:
- A. Does not involve splanchnic arteries and coronary arteries
- B. Involves Aorta and splanchnic arteries only
- C. Involves basilar cerebral arteries, and coronary arteries
- D. Involves Aorta but not coronary arteries

Ans C Involves basilar cerebral arteries, and coronary arteries

Segmental arterial mediolysis (SAM): nonatherosclerotic, noninflammatory arterial disease that affects mainly muscular arteries and can yield an angiogram that mimics PAN. SAM characteristically involves splanchnic arteries in middle-aged and elderly patients, basilar cerebral arteries in adults, and coronary arteries in children and young adults. The aorta is not involved.

2. Highly Cardiotoxic is:
- A. Bleomycin
- B. Doxorubicin
- C. MTX
- D. Mitomycin

Ans B Doxorubicin

Doxorubicin cardiotoxicity causes characteristic histologic changes on endomyocardial biopsy, with vacuolar degeneration and myofibrillar loss. Potential mechanisms of cardiotoxicity include free radical formation, release of histamines and catecholamines, and effects on mitochondrial function and nucleic acid synthesis.

3. In an Elderly female with raised 5 HTT levels, Pellagroid rash and Flushing as chief symptoms most likely has:
- A. Carcinoid tumor, metastatic
- B. Cholangiocarcinoma, primary
- C. Hepatocellular carcinoma, primary
- D. Mucinous adenocarcinoma of the colon, metastatic

Ans A Carcinoid tumor, metastatic

Carcinoids are the most frequent small intestinal neoplasm, with over half found incidentally either at autopsy or at operation for other diseases. Patients may present with Pellagroid rash and Flushing Once "metastasis occurs to the liver", features of the carcinoid syndrome become apparent. The metastatic tumors associated with carcinoid syndrome usually arise from primary tumors in the ileum. The syndrome also can be produced by neoplasms arising from the remainder of the small intestine. Carcinoid tumors have a proclivity to metastasize to the liver and may involve this organ extensively and predominantly. Patients have raised 5 HTT levels.

4. A 55 year old man who is a smoker had a road traffic accident and sustained fracture of femur. Two days later he developed rash over chest with sudden breathlessness. The most probable cause can be:
- A. Pneumonia.
- B. Congestive heart failure
- C. Pulmonary Thrombosis
- D. Fat Embolism

Ans D Fat Embolism

Lipiduria, Fat droplets in urine, Petechiae over chest after long bone trauma along with Retinal hemorrhages and cotton-wool spots may also be seen after bone fractures or pelvic surgery, probably as the result of fat embolism.

5. A 55 year old Alcoholic and Smoker was given Steroids after Renal transplant. After Six years he had difficulty in walking and pain in both hips. Which one of the following is most likely cause?
- A. Primary Osteoarthritis
- B. Avascular necrosis
- C. Tuberculosis
- D. Vitamin K toxicity

Ans B Avascular necrosis

The Femoral head is the commonest site of symptomatic osteonecrosis mainly because of its peculiar blood supply. There is difficulty in walking and pain in both hips.

6. Which one of the following is the investigation of choice for evaluation of suspected Perthes' disease?
- A. Plain X-ray
- B. Ultrasonography (US)
- C. Computed Tomography (CT)
- D. Magnetic Resonance Imaging (MRI)

Ans D MRI

Legg-Calve-Perthes disease is also known Coxa Plana. It is usually common in boys between 4 and 8 years (mean age 7 years) but can also occur less than 2 years and more than 12 years. There is Osteochondrosis of the Head of the femur in children which is characterized by initial epiphyseal necrosis or degeneration followed by regeneration or recalcification. **MRI is the Modality of Choice in Diagnosis.**

7. "Rugger Jersey Spine" is seen in:
- A. Hyperthyroidism
- B. Achondroplasia
- C. Renal osteodytrophy
- D. Marfan's syndrome

Ans C Renal osteodytrophy

In older children with longstanding disease there may be displacement of the epiphyses (epiphyseolysis). Osteosclerosis is seen mainly in the axial skeleton and is more common in young patients. It may produce a **'Rugger jersey' appearance in lateral x-rays of the spine, due to alternating bands of increased and decreased bone density.**

8. Oligospermia is a side effect of which of the following drug:
- A. Methotrexate
- B. D-Penicillamine
- C. Leflunamide
- D. Hydroxychloroquine

Ans A Methotrexate

Effect of MTX on Urogenital System:
Renal failure, azotaemia, cystitis, haematuria, defective oogenesis or spermatogenesis, transient oligospermia, menstrual dysfunction, infertility, abortion, foetal defects, severe nephropathy. Vaginitis, vaginal ulcers, cystitis, haematuria and nephropathy have also been reported.

9. A 23 year old African male has Jaw Swelling. It was Diagnosed as Burkitts lymphoma. The Lymphoma shows translocation of:
- A. 8:14
- B. 9:22
- C. 11:14
- D. 14: 18

Ans A 8:14

The specific chromosomal translocations seen in Burkitt's lymphoma involve the c-myc oncogene on chromosome 8 and the immunoglobulin heavy- or light-chain genes on chromosomes 14, 2, or 22.

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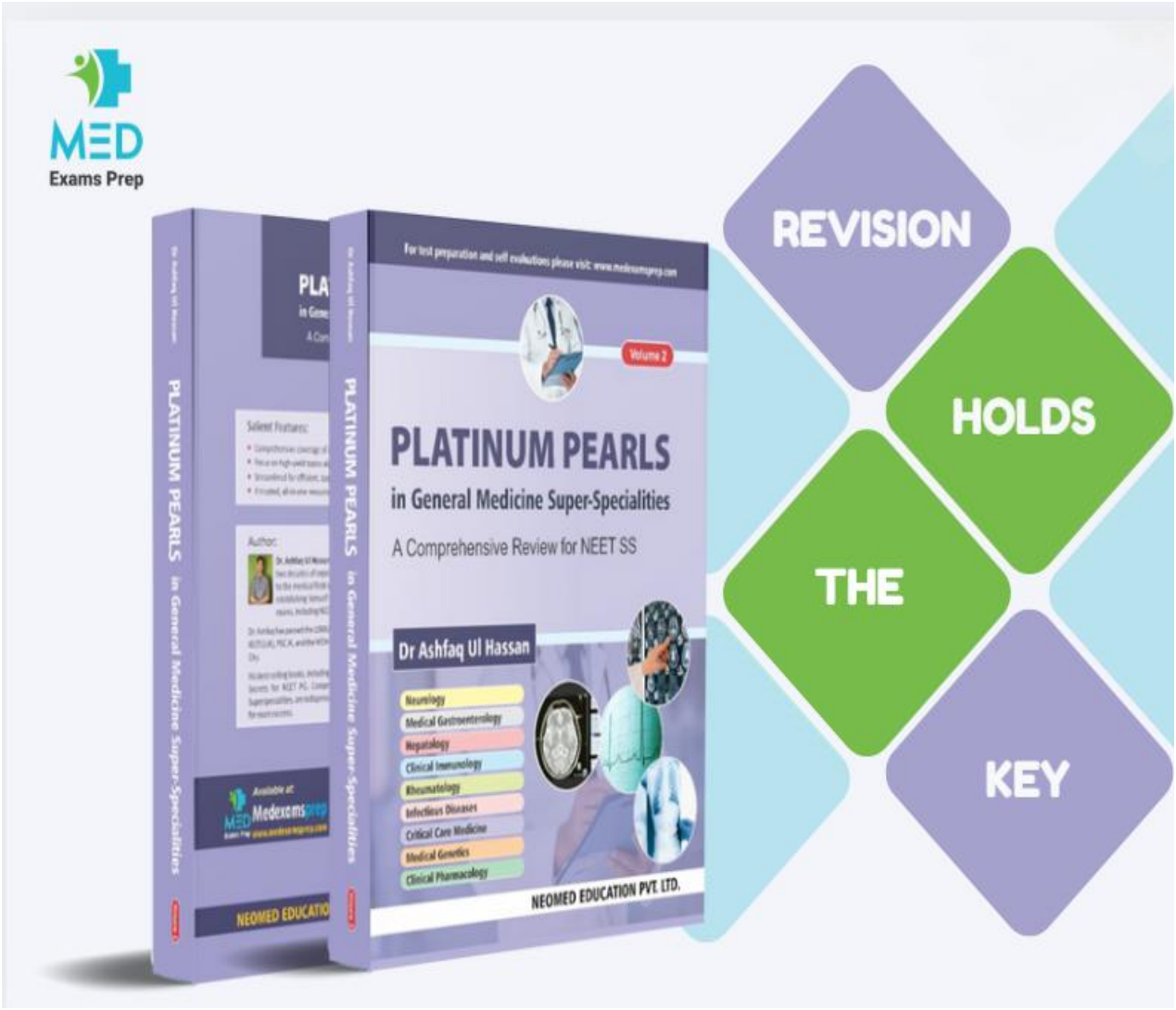
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